



Hurricane Netting System

Installation Guidelines

For
Large Missile Impact
&
Wind Abatement

Find more online including
instrucciones en Español at
www.hurricane-net.com

ver 2.0 October, 2006



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Materials Included

Contents:



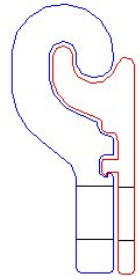
CAT-5 Box Kit, 25' or 50'

Net (7.5' X 25' or 7.5' X 50', Grommets 6" on center)

Rope (50' for 25', 100' for 50')

CAT-5 Clamps – (3) for 25' box (6) for 50' box

Storage Bag



CAT-5 Clamp



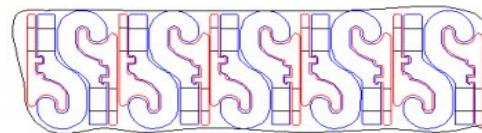
Free storage bag included in kit

Optional Tools/Hardware Needed:

- Scissors (to cut fabric to desired size)
- Drill/Bits (to install anchors to structure/foundation)
- Hammer or pliers (to close CAT-5 clamps)
- Fasteners (see information contained herein)
- Screwdriver (as needed to secure fasteners)
- Ground anchors (capacity to match application)

CAT-5 Additional Optional Products:

- Clamps (10 pack)



10-PACK

- Extra Bags

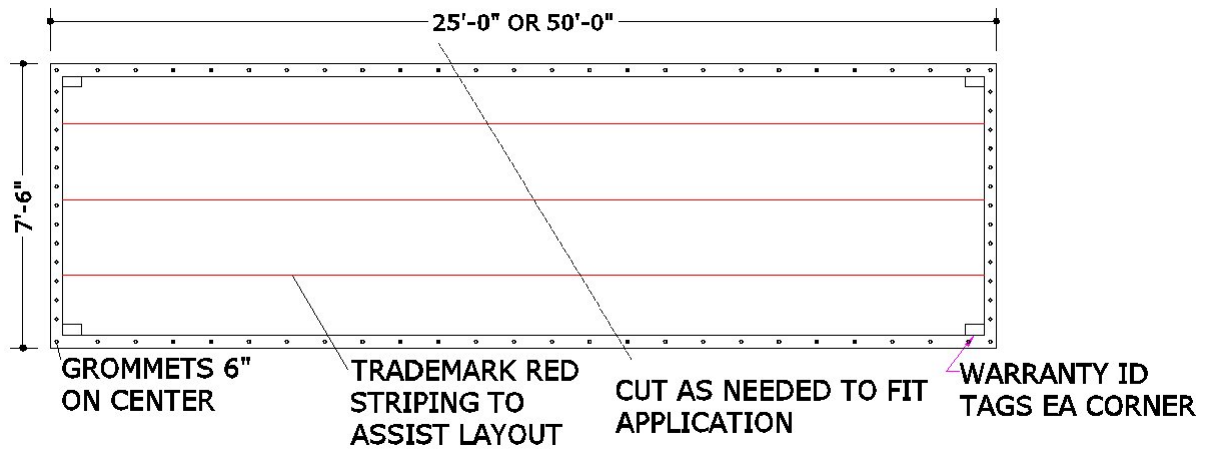


Product General Concepts

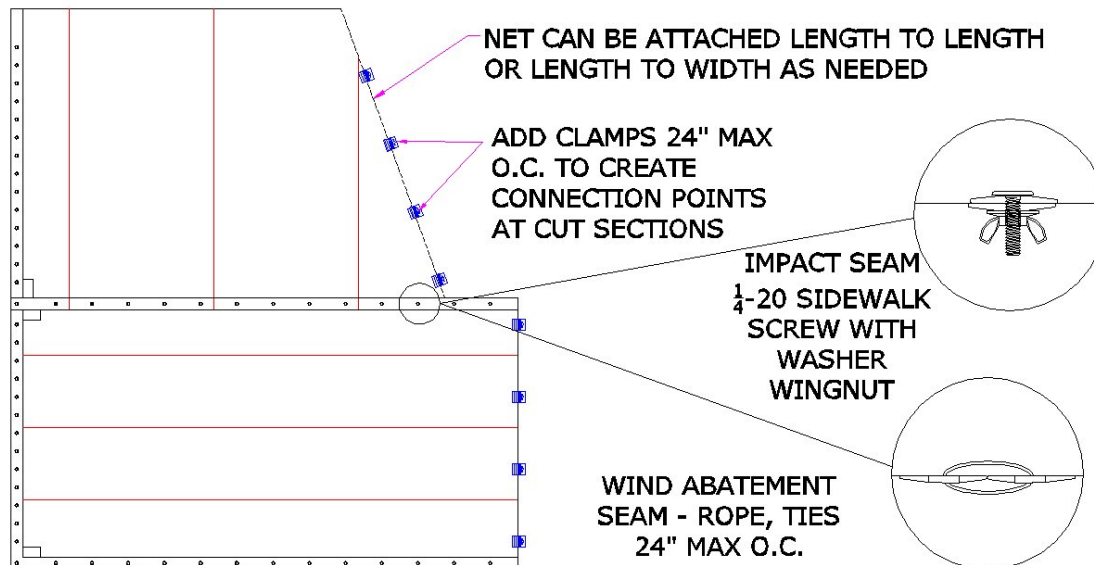
The CAT-5 Hurricane Netting System helps deflect and slow wind, while letting air 'breathe' in a structure before, during, and after a storm, allowing light to still pass through and provide usable areas during times of power outages. Effective use of the net will also keep covered contents in place and from becoming flying debris.

Consider the CAT-5 Hurricane Netting components as building blocks. Using sound engineering principles, the use of the product is limited only to the imagination.

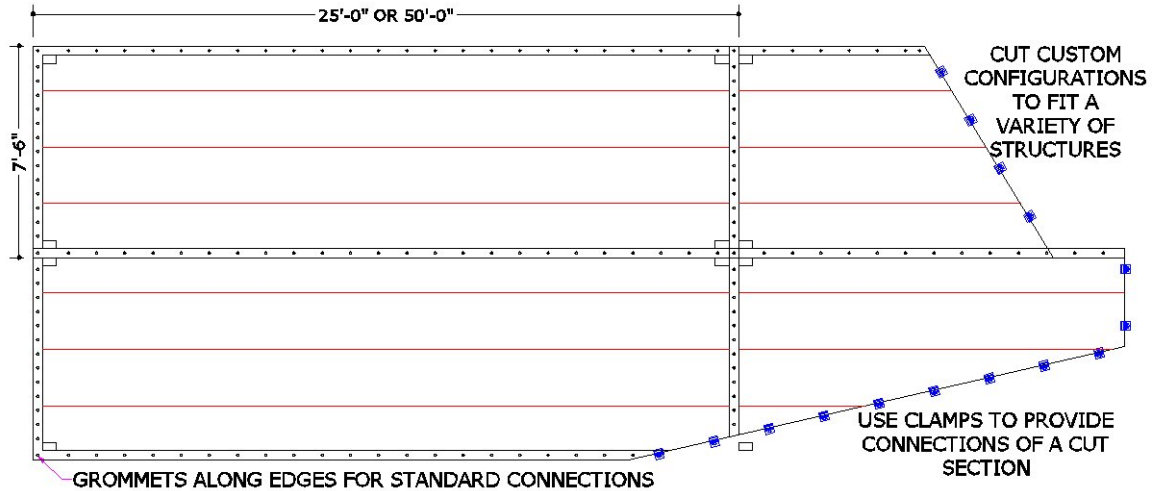
The net is shipped in one piece:



...Then cut on-site to fit, and fitted with clamps...

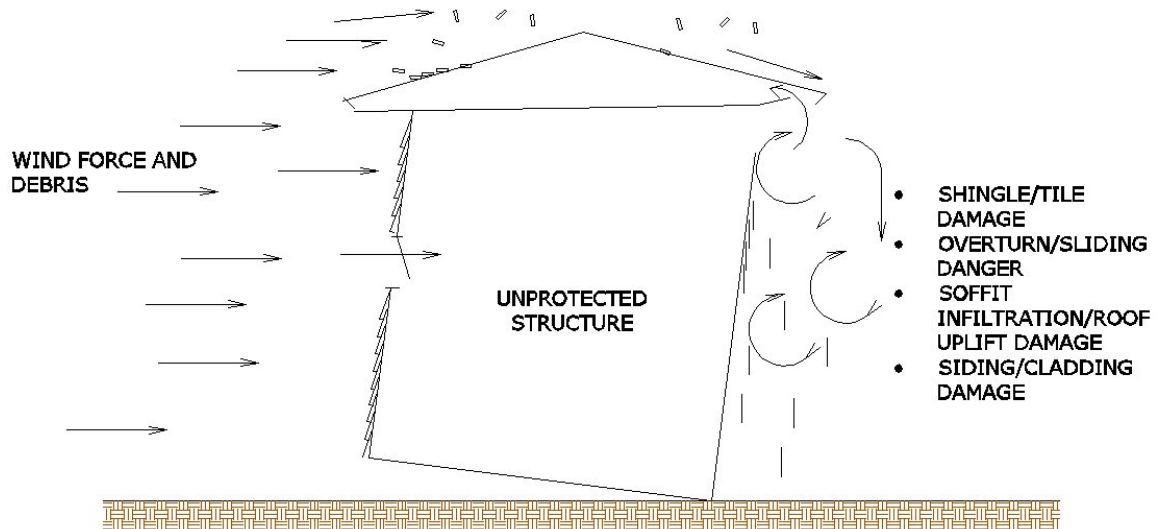


...The net can be connected together to provide complete protection for larger areas...

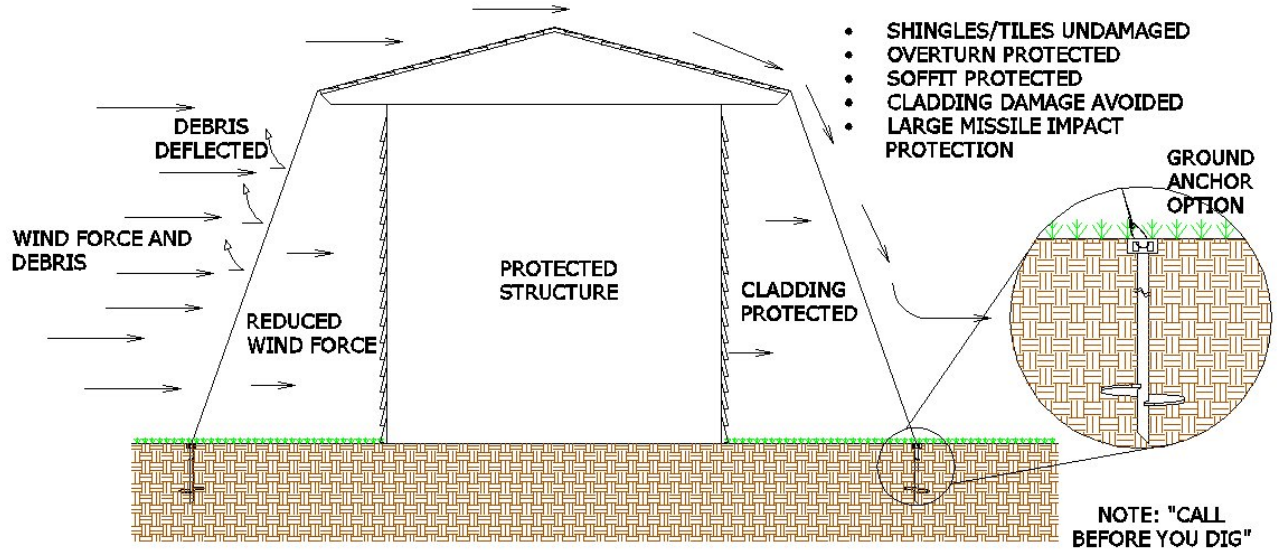


Use in conjunction with structures that are already fitted with impact protection systems over openings to provide enhanced protection for your entire outdoor possessions.

Consider the many benefits of the net by reviewing the potential damage to structures caused by high winds:

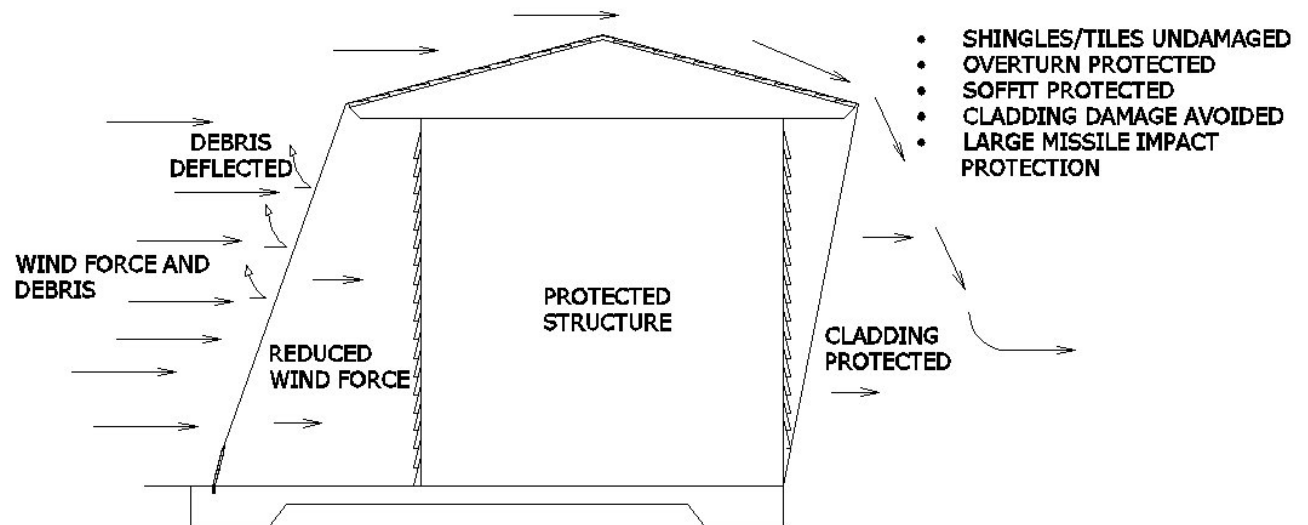


The CAT-5 Hurricane Net can protect structures from ALL these elements:



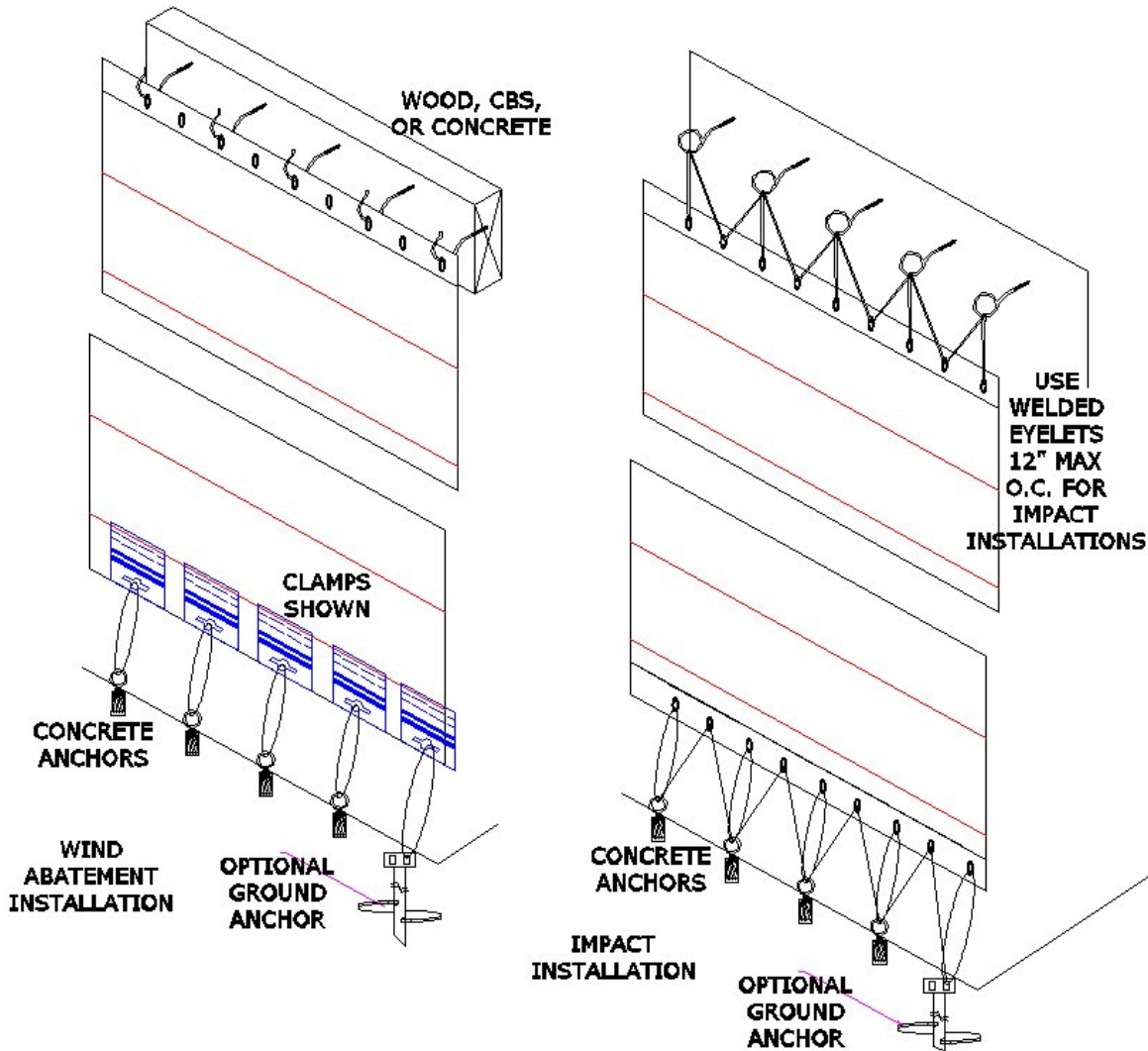
Call before you dig: (800) 432-4770

Or another example to concrete and the structure's foundation:



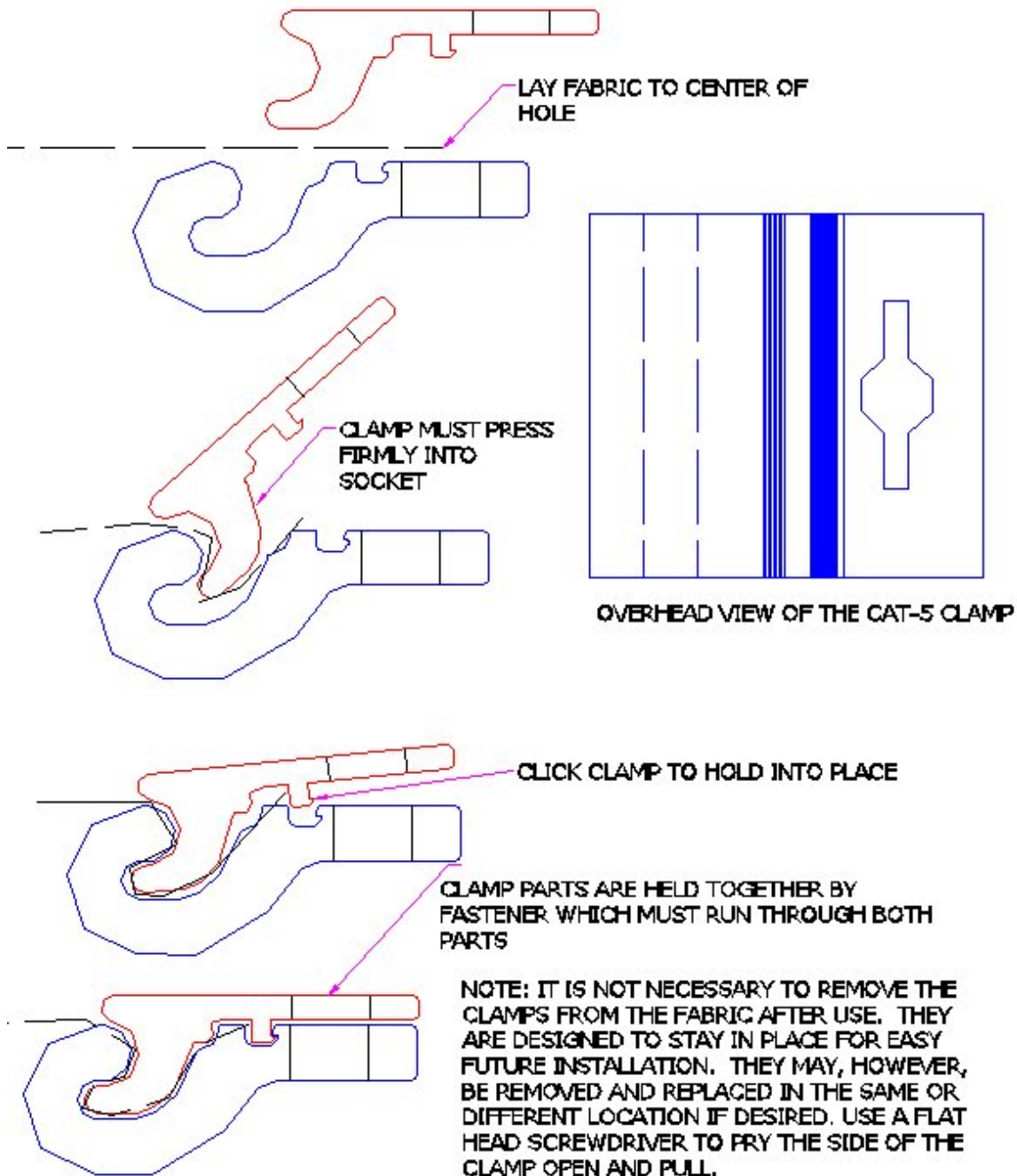
Here is some more detail on installation:

The net can be hooked, tied, or directly fastened to connectors.



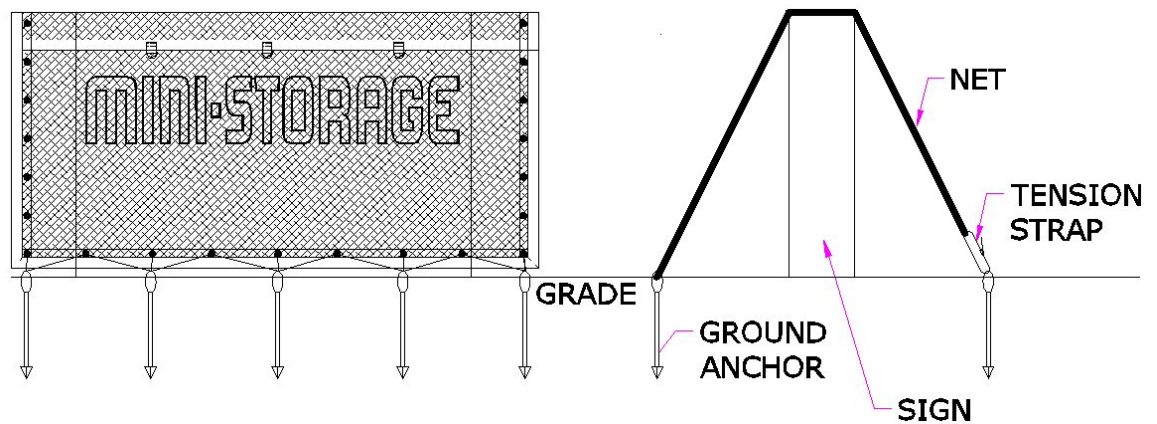
At the base, the net can be strapped or tied with the included rope to ground anchors or eyebolts.

The CAT-5 clamps can easily be installed where needed and left in-place for future use. Here's how they're installed:



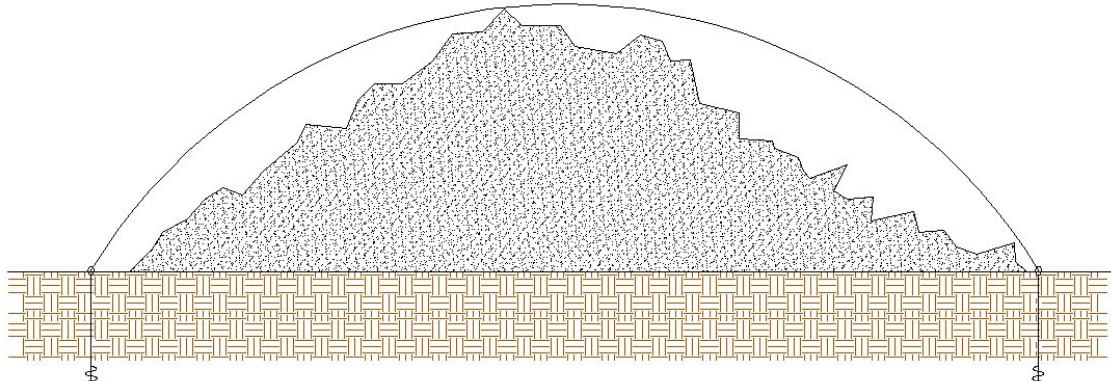
Tap the clamp together with a small hammer or pliers. The clamp clip will keep the clamp pieces together.

Here's a typical installation over a sign or similar kiosk:

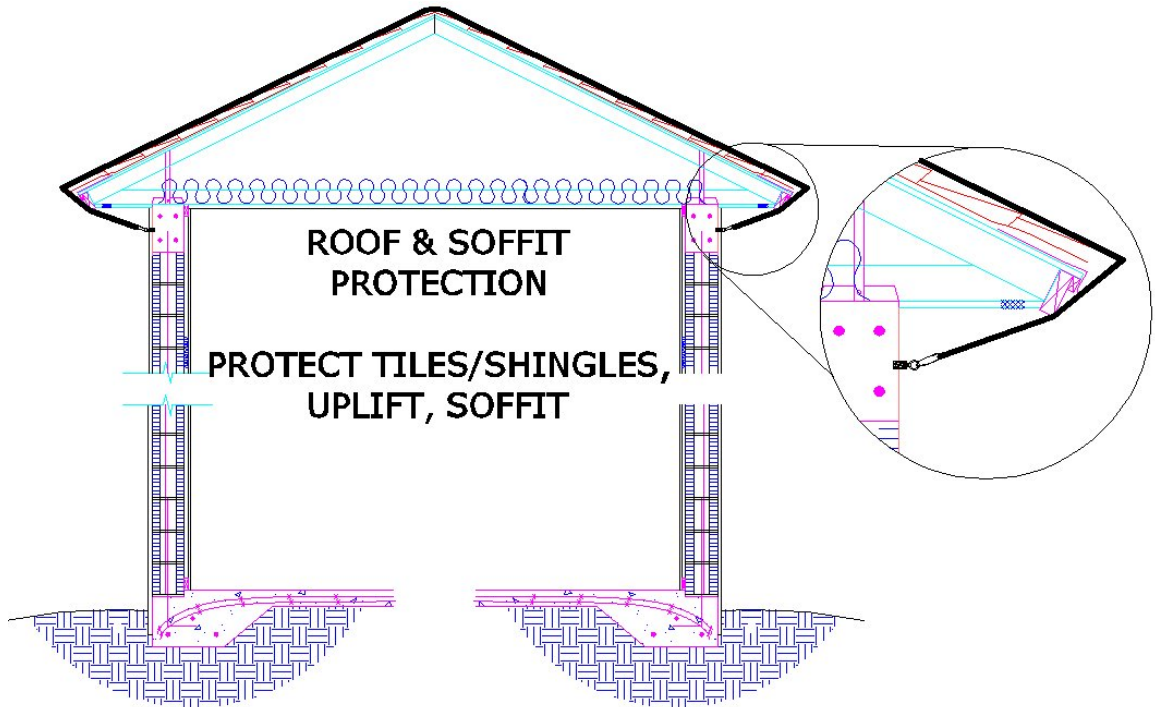


The net can also be used to secure loose debris, construction materials, or landscaping...

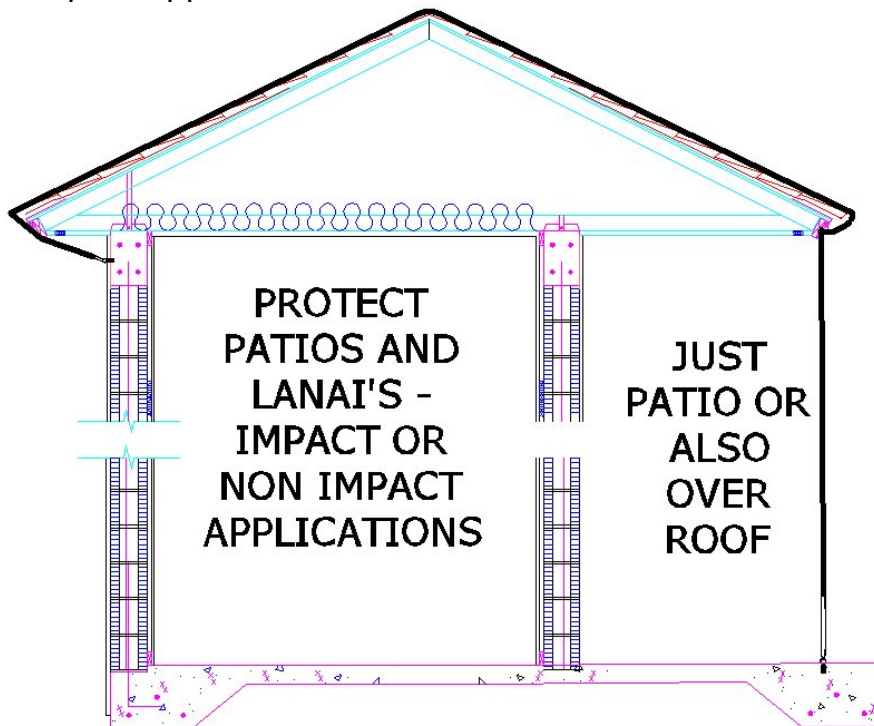
- **DEBRIS/LANDSCAPING/CONSTRUCTION MATERIAL PROTECTION**
- **FAST INSTALLATION**
- **REUSABLE-RESIZABLE COVERING**



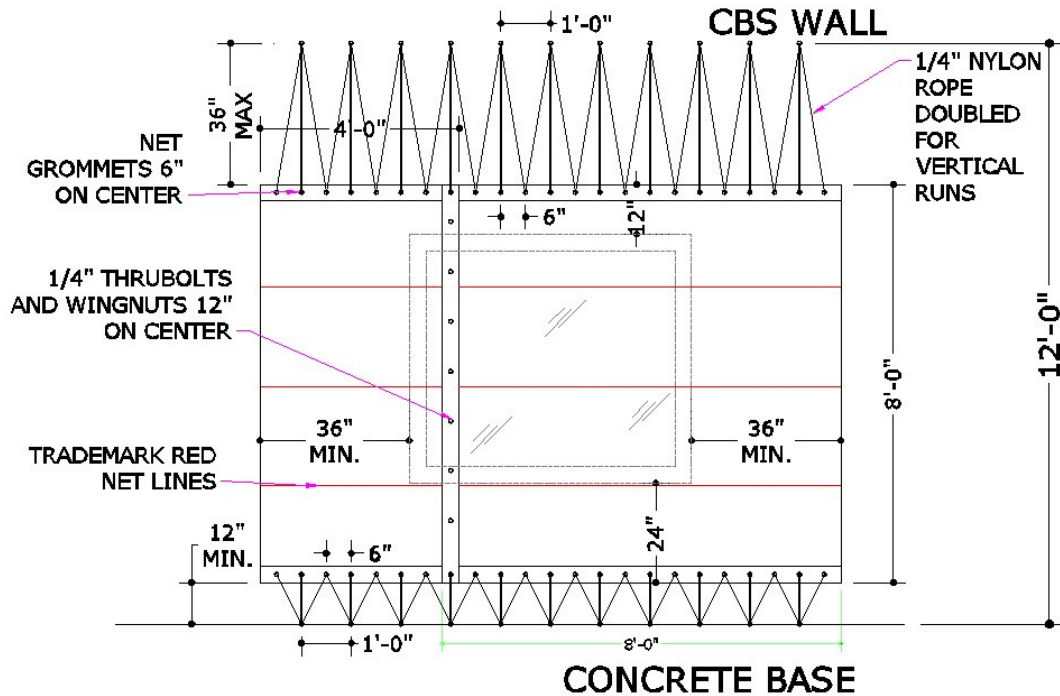
Protect your roof shingles or tiles, soffit, and prevent your roof from uplift and other damage:



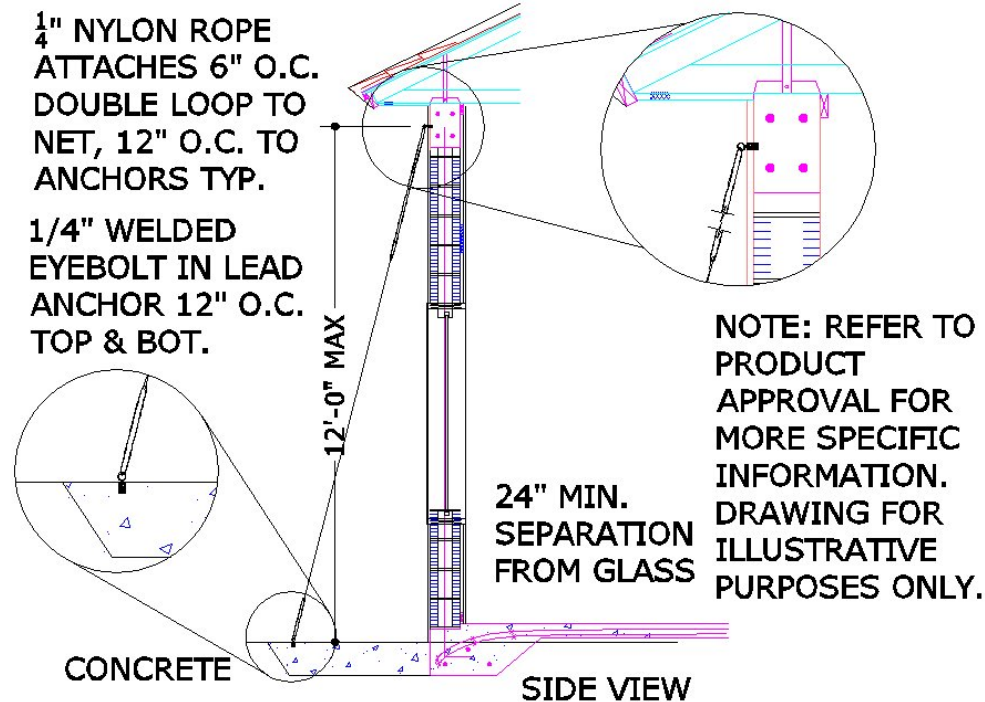
Or continue the netting down over patios and lanais in an impact or non-impact application:



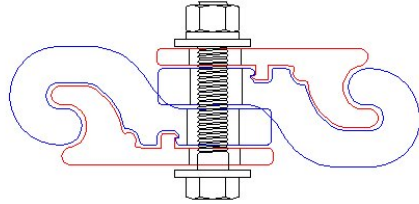
Below are the limits of a large-missile impact approved installation. Refer to the product approval for more complete information. Visit www.hurricane-net.com for more information.



GLAZING IMPACT PROTECTION APPLICATION



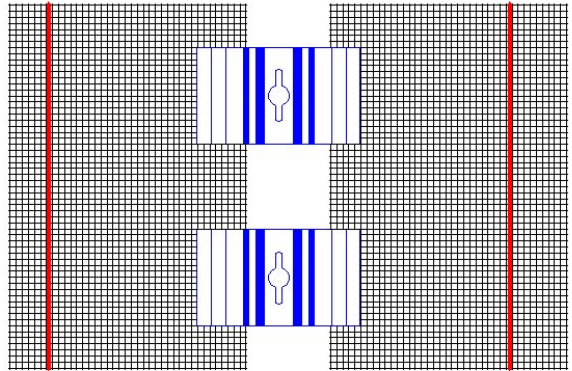
Other Custom Applications:



**CLAMP TO CLAMP CONNECTION
USEFUL FOR PROVIDING AN
ADDITIONAL MOUNTING POINT AT SEAM**

OR TO CONNECT A CUT NET AREA

**USEFUL FOR CUSTOM CORNERS AND TO
CREATE DOORS/OPENINGS AS NEEDED**



Contact your net representative or visit www.hurricane-net.com for more information. Custom orders and special applications can be made available in bulk.

Services are available to paint retail sign names, and special messages such as 'Open For Business'.

Technical Specifications

Wind Abatement:

- Ultimate pull strength per clamp = 384LB
- Allowable pull strength per clamp on fabric (1.5FS)=256LB
- Approx. %Open of fabric =47%, %Solid = 53%
- Total equivalent force per clamp (considering openness) = 483LB

FABRIC & CLAMP CAPACITY CALCULATION EXAMPLE

Using single row of clamps over roof or similar structure:

Span: 24ft (between clamps, or on uplift portion of net, usually 1/2 the roof or leeward side of installation)

Calculated ASCE 7 uplift or wind resistance pressure =20PSF

(MWFRS or C&C as applicable, to be performed by registered professional engineer, based on design velocity and exposure and portion of the building pressure is acting on)

On center spacing of clamps = $483\text{LB}/(24\text{ft}/2*20\text{psf}) = 24\text{in O.C.}$

Note: alter clamp spacing or use intermediate clamps to achieve various alternate results. See installation illustration suggestions contained herein. Actual installation may vary in accordance with proper engineering principles. Use in HVHZ design areas is subject to proper engineering principles and limitations.

Note: anchorage of clamps must resist the calculated load in the proper combination of shear and tension as designed by a registered professional engineer on a site-specific basis in accordance with anchoring geometry. Information presented herein is provided as a basic guide and starting point for installation of the product. Ground anchors and fasteners shall maintain their respective installation requirements and factors of safety which shall be designed and calculated by others.



Technical Specifications (continued)

Large Missile Impact Version

- Maximum Anchor Spacing: 12"
- Maximum anchor/ rope attachment to Netting: 6"
- Maximum head to sill distance = 12'-0"
- Maximum net head to sill length = 8'-0"
- Minimum separation from glass = 24" @ 12' height
- Anchor Diameter = ¼" min, welded eyebolt (stainless steel), 1 ½" penetration to wood, 1" to concrete or CBS using lead anchor
- Rope = ¼" nylon (125lb min. working strength)

Test Standards:

ASTM D3775:	12" warp, 9" fill
ASTM D3776	13.2 oz/cuyd (fabric only)
ASTM D5034	tensile strength (grab) 572lbf warp, 632lbf fill
ASTM D1117	Tear Strength (trapezoidal), 99lb warp, 121lb fill
ASTM D5035	Elongation, % 23.7 warp, 21.7 fill
ASTM D3884	Abrasion Resistance, (no exposure to core yarn)
ASTM G53	Weatherability, 1200 hours, no discoloration
ASTM G21	Mildew Resistance, no growth

ASTM D412 (Wind Abatement) – 389lb (clamp, test load)
ASTM 1886, 1996 (Large Missile Impact) –Passed (9/06, CTC labs)
ASTM E330 (Cyclical Loading)
Metro Dade TAS 201, 202, 203 – Passed (9/06, CTC labs)
Openness factor = 46.7%, Coverage factor = 53.3%
Design load: 83.2psf test / 1.5FS / .55 openness = 100psf @ 96"

Visit www.hurricane-net.com for more information.



IMPORTANT

The CAT-5 Hurricane Netting System is intended to be a wind abatement and/or large missile impact protection system offering varying degrees of protection to residences and other structures. With proper inspection of the product and installation by a qualified person and in accordance with these guidelines, the CAT-5 system enhances the ability of residences and other structures to reduce the effect of high winds and flying debris. However, no man-made system can totally protect any structure against the forces of nature.

Upon receipt of the product, the customer shall examine the contents to make certain that (1) all parts are included; (2) no part is broken, cracked, bent or not as represented in the enclosed drawings/sketches. It is recommended that a qualified individual inspect and install the system. If the delivery of the system is incomplete or defective in any manner, it should not be used. Care should be taken in removing, inspecting and otherwise handling all parts.

No part should be substituted nor modified in any way. No unauthorized part(s) should be added or omitted. Installation should be made prior to the onset of winds or inclement weather.

Installation should not be attempted by any person not able and qualified. Installation should not be performed by any person who has an infirmity.

Prolonged exposure to sunlight should be avoided to prevent discoloration. Care should be taken in removal and storage of all parts. Effectiveness of reuse of the system will be determined by the care in removal of the system and integrity of components.

THERE IS NO WARRANTY WHATSOEVER, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.

THERE ARE NO ORAL WARRANTIES. THERE ARE NO WARRANTIES UNLESS SET FORTH HEREIN. NO ORAL COMMUNICATION WITH THE SELLER, BY TELEPHONE OR OTHERWISE, WILL CREATE A WARRANTY OR ANY REPRESENTATION WHATSOEVER AS TO INSTALLATION OF THE PRODUCT.

IMPORTANT (Continued)



Every attempt has been made to design and deliver a reasonably effective system for offering a degree of protection against damage caused by high winds. Because no system can prevent any or all damage, no warranty can be offered on the contents protected. The purchaser thus assumes all risk of loss if the system, however installed and used, fails to protect a structure against the effects of hurricane force winds. Manufacturers warranty included with the product is a 10 year limited warranty against defective materials only. More information on the manufacturers warranty can be found on the warranty certificate found in the product package and online at www.hurricane-net.com

